

**PROPOSED ROUTE PERMIT  
FOR CONSTRUCTION OF  
TWO HIGH VOLTAGE TRANSMISSION LINES  
AND SUBSTATION UPGRADES IN  
WESTERN MINNESOTA**

**ISSUED TO  
OTTER TAIL CORPORATION, d/b/a OTTER TAIL POWER  
COMPANY, AND PARTNERS  
PUC DOCKET No. E017, et al. /TR-05-1275**

In accordance with the requirements of Minnesota Statutes Section 216E.03 and Minnesota Rules Chapter 7849.5010-6500, this Route Permit is hereby issued to OTTER TAIL CORPORATION, d/b/a OTTER TAIL POWER COMPANY, AND PARTNERS.

OTTER TAIL POWER COMPANY, CENTRAL MINNESOTA MUNICIPAL POWER AGENCY, HEARTLAND CONSUMERS POWER DISTRICT, MONTANA-DAKOTA UTILITIES COMPANY AND WESTERN MINNESOTA MUNICIPAL POWER AGENCY are authorized by this route permit to construct a new 230 kilovolt high voltage transmission line and associated facilities approximately 41 miles long between the South Dakota border west of Ortonville in Big Stone County and the Morris Substation in Stevens County, and a new 345 kV high voltage transmission line and associated facilities approximately 53 miles long between the South Dakota border west of Canby and the Granite Falls Substation in Yellow Medicine County. The project shall be built along the route identified in this Permit and portrayed in the attached maps and in compliance with the conditions specified in this Permit.

Approved and adopted this \_\_\_\_\_ day of June, 2008

BY ORDER OF THE COMMISSION

---

Burl W. Haar,  
Executive Secretary

## **I. ROUTE PERMIT**

The Minnesota Public Utilities Commission (PUC) hereby issues this Route Permit to Otter Tail Power Company and Partners (Partners or Permittees) pursuant to Minnesota Statutes section 216E.03 and Minnesota Rules Chapter 7849.5010-6500. The Partners comprise Otter Tail Corporation (d/b/a Otter Tail Power Company), Central Minnesota Municipal Power Agency, Heartland Consumers Power District, Montana-Dakota Utilities Company, and Western Minnesota Municipal Power Agency (as represented by Missouri River Energy Services).

This permit authorizes the Partners to construct a 230 kilovolt high voltage transmission line in Big Stone and Stevens Counties, Minnesota, build a Johnson Junction Substation, construct a 345 kilovolt high voltage transmission line in Yellow Medicine County, Minnesota, and relocate and update the Canby Substation.

## **II. PROJECT DESCRIPTION**

This Permit authorizes the Partners to construct two new high voltage transmission lines and a new substation and to relocate one substation along with the associated transmission lines.

One new transmission line is a 230 kilovolt (kV) line that runs from the Big Stone Substation in South Dakota to the Morris Substation near Morris, Minnesota, a total of approximately 48 miles, about 43 miles of which are in Minnesota. The second high voltage transmission line is a 345 kV line between the Big Stone Substation to the Granite Falls Substation in Yellow Medicine County, Minnesota, a distance of 90 miles, 54 miles of which would be in Minnesota.

The Big Stone to Morris transmission line will be constructed at 230 kV. Unless different structures are requested by the Partners and authorized by the Plan and Profile procedures in this permit as specified below in Section IV, the Partners are authorized to use H-frame steel or wood structures for the 230 kV transmission line and single pole structures as required. The structures will be between 70 and 100 feet in height with an average span of 700 feet. The conductor is proposed to be 1272 ACSR or 954 ACSS for each phase. The right-of-way (ROW) for this 230 kV line will be 125 feet. A double-circuit 230 kV/115 kV transmission line structure will be necessary in Ortonville, crossing the Minnesota River.

The Big Stone to Granite Falls transmission line will be constructed at 345 kV. Unless different structures are requested by the Partners and authorized by the Plan and Profile procedures in this permit as specified below in Section IV, the Partners are authorized to use H-frame steel or wood structures for the 345 kV transmission line and single pole structures as required. The structures will be between 80 to 120 feet in height with an average span of 800 feet. The conductor is proposed to be bundled (two conductors) 1272 SCSR or bundled 954 ACSS for each phase. The ROW for this 345 kV line will be 150 feet. A short 230 kV segment will run from Hazel Township to the Granite Falls Substation.

### **III. DESIGNATED ROUTE AND SUBSTATION SITES**

#### **A. The 230 kV High Voltage Transmission Line.**

The route designated by the PUC is described below and shown on the maps in Attachment B to this Permit. The approved route extends from the South Dakota Border at Ortonville and proceeds east to the Morris Substation, including:

- a new 230 kV transmission line from the Big Stone Plant to Ortonville, Minnesota, two miles of which are located in Minnesota;
- the rebuild of an existing 115 kV transmission line to 230 kV from Ortonville, Minnesota, to the Johnson Junction Substation located in Johnson, Minnesota (approximately 25 miles), and then from the Johnson Junction Substation to the Morris substation near Morris, Minnesota (approximately 16 miles) and the removal of about 1.2 miles of 115 kilovolt transmission line from the Ortonville substation.

As defined in the maps in Appendices B.1-B.3 of the Environmental Impact Statement, the approved route consists of the following route segments in Minnesota: **M1, M2, M3, M5, M7, M9, M10 and M17**. The final approved route is also shown in Maps 1-3, in Attachment B of this permit. Except as modified in the Special Conditions, Section V of this Permit, the route has an allowed corridor width of 1000 feet on either side of the route centerline to allow the Partners final right-of-way design flexibility.

#### **B. The 345 kV High Voltage Transmission Line.**

The route designated by the PUC is described below and shown on the maps in Attachment B to this Permit.

- a new line capable of operating at 345 kV approximately 14 miles long crossing the Minnesota-South Dakota border due west of Canby and running to the Canby Substation;
- the rebuild of an existing 115 kV transmission line from Canby, Minnesota, to Granite Falls, Minnesota (approximately 30 miles) designed and capable of operating at 345 kV, but which would operate at 230 kV initially. For approximately nine miles from Hazel Run Township to Granite Falls, the line will be constructed to 230 kV standards. The line will terminate at the Granite Falls Substation.

As defined in the maps in Appendices B.9-B.16 of the Environmental Impact Statement, the approved route consists of the following route segments in Minnesota: **G14, G15A, G15B, G17, G21, G30, G31, G33A, G33B, G34A, G34B, G39, G45, G49, G50 and G53**. The final approved route is also shown in Maps 4-6 in Attachment B of this permit. Except as modified in the Special Conditions, Section V of this Permit, the route has an allowed corridor width of 1000 feet on either side of the route centerline to allow the Partners final right-of-way design flexibility.

### **C. Modifications at the Johnson Junction Switch Station and Modifications and Relocation of the Canby Substation**

A new substation to accommodate the 230 kV Morris transmission line will be constructed adjacent to the Johnson Junction switch station on approximately four acres directly south of the existing fenced area. The new Johnson Junction Substation will include a new 3-breaker ring-bus, 3-phase 230/115 kV transformer, 115 kV breaker, control house for relaying and fencing to enclose the yard. The location of the new substation is portrayed in Map 7 in Attachment B.

Modifications to the Canby Substation include a new 230 kV 3-position ring-bus, 3-phase 230/115/41.6 kV transformer, 115 kV breakers, control house for relaying and fencing to enclose the yard. A 345/115/41.6 kV transformer will replace the 230/115/41.6 kV transformer when the Granite Falls transmission line is re-energized at 345 kV. The substation will be relocated approximately one mile northeast of the existing facility along U.S. Highway 75 in the SW ¼ of the SW ¼ of Section 19 of Oshkosh Township in order to move the substation out of the floodplain. The new substation location is portrayed in Map 8 in Attachment B.

Modifications at the termini at the Morris and Granite Falls substations fall under the jurisdiction of the Western Area Power Administration and are not addressed under this permit.

## **IV. GENERAL CONDITIONS**

The Permittees shall comply with the following conditions during construction of the transmission line and associated facilities and the life of this Permit.

**A. Plan and Profile.** At least 14 days before right-of-way preparation for construction begins, the Permittees shall provide the PUC with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, cleanup, and restoration for the transmission line and the substation site. The Permittees may not commence construction until the 14 day period has expired or until the PUC has advised the Permittees in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittees intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the PUC, the Permittees shall notify the PUC at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

### **B. Construction Practices.**

1. **Application.** The Permittees shall follow those specific construction practices and material specifications described in the Permit Application to the Minnesota Public Utilities Commission for a Route Permit for the Big Stone Transmission Project dated December 9, 2005, PUC Docket E017, et al./TR-05-1275, unless this Permit establishes a different requirement in which case this Permit shall prevail.

2. **Field Representative.** At least ten days prior to commencing construction, the Permittees shall advise the PUC in writing of the person or persons designated to be the field representative for the Permittees with the responsibility to oversee compliance with the conditions of this Permit during construction. This person's address, phone number, and emergency phone number shall be provided to the PUC, which may make the information available to local residents and public officials and other interested persons. The Permittees may change the field representative at any time upon written notice to the PUC.
  3. **Cleanup.** All waste and scrap that is the product of construction shall be removed from the area and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.
  4. **Vegetation Removal.** The Permittees shall minimize the number of trees to be removed as part of the construction of the line, taking into account Permit Condition IV.H.1, which recognizes that the Permittees have obligations to comply with clearance requirements.
  5. **Erosion Control.** The Permittees shall implement reasonable measures to minimize runoff during construction and shall plant or seed non-agricultural areas that were disturbed where structures are installed. Upon request, the Permittees shall submit to the PUC a copy of any Soil Erosion and Sediment Control Plan prepared for the Minnesota Pollution Control Agency as part of a storm-water runoff permit application.
  6. **Temporary Work Space.** The Permittees shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way.
  7. **Restoration.** The Permittees shall restore all temporary work spaces, access roads, and other private lands affected by construction of the transmission line. Restoration must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within sixty days after completion of all restoration activities, the Permittees shall advise the PUC in writing of the completion of such activities.
  8. **Notice of Permit.** The Permittees shall inform all employees, contractors, and other persons involved in the construction of the transmission line of the terms and conditions of this Permit.
- C. Periodic Status Reports.** Upon request, the Permittees shall report to the PUC on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittees need not report more frequently than quarterly.
- D. Complaint Procedure.** Prior to the start of construction, the Permittees shall submit to the PUC the company's procedures to be used to receive and respond to complaints. The procedures shall be in accordance with the requirements set forth in Exhibit 1 attached to this Permit.
- E. Notification to Landowners.** The Permittees shall provide all affected landowners with a copy of this Permit at the time of the first contact with the landowners after issuance of this Permit.

**F. Drain Tile Restoration Plan.** Prior to the start of construction, the Permittees shall submit to the PUC its procedures for minimizing drain tile damage during construction and operation and restoration policies. Permittees must submit the Drain Tile Restoration Plan to the PUC for review prior to beginning construction as described in Permit General Conditions, Section IV.A, above.

**G. Completion of Construction.**

1. **Notification to PUC.** At least three days before the line is to be placed into service, the Permittees shall notify the PUC of the date on which the line will be placed into service and the date on which construction was complete.
2. **As-Builts.** Within 180 days of completion of the project, the Permittees shall submit copies of all the final as-built plans and specifications developed during the project.
3. **GPS Data.** Within sixty days after completion of construction, the Permittees shall submit to the PUC, in the format requested by the PUC, geo-spatial information (GIS compatible maps, GPS coordinates, etc.) for all above ground structures associated with the transmission lines and each substation connected.

**H. Electrical Performance Standards.**

1. **Grounding.** The Permittees shall design, construct, and operate the transmission line in such a manner that the maximum steady-state short-circuit current shall be limited to five milliamperes rms alternating current between the ground and any non-stationary object within the right-of-way including but not limited to, large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the short circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code.
2. **Electric Field.** The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.
3. **Interference with Communication Devices.** If interference with radio or television, satellite or other communication devices is caused by the presence or operation of the transmission line, the Permittees shall take whatever action is prudently feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

**I. Other Requirements.**

1. **Applicable Codes.** The Permittees shall comply with applicable North American Electric Reliability Council (NERC) planning standards and requirements of the National Electric Safety Code (NESC) including clearances to ground, clearance to crossing utilities,

clearance to buildings, right-of way widths, erecting power poles, and stringing of transmission line conductors.

2. **Other Permits.** The Permittees shall comply with all applicable state rules and statutes. The Permittees shall obtain all required permits for the project and comply with the conditions of these permits. A list of the required permits is included in the permit application and the environmental impact statement. The Permittees shall submit a copy of such permits to the PUC upon request.
3. **Pre-emption.** Pursuant to Minnesota Statutes section 216E.10, subdivision 1, this Site Permit shall be the sole route and substation site approval required to be obtained by the Permittees for construction of the facilities and this Permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

**J. Delay in Construction.** If the Permittees has not commenced construction or improvement of the route within four years after the date of issuance of this Permit, the PUC shall consider suspension of the Permit in accordance with Minnesota Rule 7849.5970.

## **V. SPECIAL CONDITIONS**

### **1. Permanent Right-of-Way Acquisition:**

- a. The Permittees are granted up to 125 feet of right-of-way when the 230 kV transmission line does not parallel or utilize existing highway right-of-way. Where the transmission line parallels local, county or state roadways, the Permittees are granted up to 82.5 feet of right-of-way for the 230 kV HVTL outside the roadway right-of-way.
  - b. The Permittees are granted up to 150 feet of right-of-way when the 345 kV transmission line does not parallel or utilize existing highway right-of-way, including those portions of the route where the line is to be double circuited with an existing line. Where the transmission line parallels local, county or state roadways, the Permittees are granted up to 98.5 feet of right-of-way for the 345 kV HVTL outside the roadway right-of-way.
2. The route width of 1000 feet on each side of the right-of-way is meant to allow the line to be routed along sections lines and existing roadways and to accommodate routing around certain natural areas. Otherwise, the route should as closely as possible replace the existing lines along the existing right-of-way of the lines being replaced
  3. Permittees are authorized to construct one mile of new 115 kV transmission line to accommodate the relocation of the Canby Substation one mile to the northeast, while removing approximately one mile of existing 115 kV transmission line. The alignment must be submitted with the Plan and Profile (Section IV. A) for final approval before construction.

4. The Partners are required to designate an environmental inspector for this Project to ensure compliance with the permit conditions.
5. The Permittees must consult with the Department of Natural Resources Area Wildlife Manager along the 230 kV line along segment M3, as portrayed in Appendix B.3 of the EIS. Avian Flight Diverters should be employed along the segment up to Highway 21 due to the presence of a primary migratory flight corridor along the chain of wetlands, lakes and native grasslands in this area.
6. The Permittees must comply with the recommendation of the Department of Natural Resources along the 345 kV line to remove the pole(s) currently in the wetland on Lanners WMA and replace them with new poles appropriately spaced to span this open water area.

## **VI. PERMIT AMENDMENT**

This permit may be amended at any time by the PUC or authorized successor agency of the State of Minnesota. Any person may request an amendment of this permit by submitting a request to the PUC in writing describing the amendment sought and the reasons for the amendment. The PUC will mail notice of receipt of the request to the Permittees. The PUC may amend the permit after affording the Permittees and interested persons such process as is required.

## **VII. PERMIT TRANSFER**

The Permittees may request at any time that the PUC transfer this permit to another person or entity. The Permittees shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer. The person to whom the permit is to be transferred shall provide the PUC with such information as the PUC shall require to determine whether the new Permittee(s) can comply with the conditions of the permit. The PUC may authorize transfer of the permit after affording the Permittees, the new Permittee(s), and interested persons such process as is required.

## **VIII. REVOCATION OR SUSPENSION OF THE PERMIT**

The PUC may initiate action to revoke or suspend this permit at any time. The PUC shall act in accordance with the requirements of Minnesota Rules part 4400.3950 to revoke or suspend the permit.

**PUBLIC UTILITIES COMMISSION  
COMPLAINT REPORT PROCEDURES FOR  
HIGH VOLTAGE TRANSMISSION LINES**

1. Purpose

To establish a uniform and timely method of reporting complaints received by the permittee concerning the permit conditions for right-of-way preparation, construction, cleanup and restoration, and resolution of such complaints.

2. Scope

This reporting plan encompasses complaint report procedures and frequency.

3. Applicability

The procedures shall be used for all complaints received by the permittee.

4. Definitions

Complaint - A statement presented by a person expressing dissatisfaction, resentment, or discontent as a direct result of right-of-way preparation, construction, cleanup and restoration. Complaints do not include requests, inquiries, questions, or general comments.

Substantial Complaint - Written complaints alleging a violation of a specific Site Permit condition that, if substantiated, could result in Permit modification or suspension pursuant to the applicable regulations.

Person - An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

5. Responsibilities

Everyone involved with right-of-way preparation, construction, cleanup and restoration is responsible to ensure expeditious and equitable resolution of all complaints. It is therefore, necessary to establish a uniform method for documenting and handling complaints directed to this project. The following procedures will satisfy this requirement:

- A. The Permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:
1. Name of the permittee and project.
  2. Name of complainant, address and phone number.
  3. Precise property description or tract number (where applicable).
  4. Nature of complaint.
  5. Response given.
  6. Name of person receiving complaint and date of receipt.
  7. Name of person reporting complaint to the EQB and phone number.
  8. Final disposition and date.
- B. The Permittee shall assign an individual to summarize complaints for transmittal to the PUC.

6. Requirements

The permittee shall report all complaints to the PUC according to the following schedule:

Immediate Reports - All substantial complaints shall be reported to the PUC the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to Wind Permit Compliance at the following: [DOC.energypermitcompliance@state.mn.us](mailto:DOC.energypermitcompliance@state.mn.us), or 1-800-657-3794. Voice messages are acceptable.

Monthly Reports

By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be sent to Dr. Burl W. Haar, Executive Secretary, Minnesota Public Utilities Commission, 121 7<sup>th</sup> Place East, Suite 350, St. Paul, MN, 55101-2147. A copy of each complaint shall be sent to Wind Permit Compliance, Minnesota Department of Commerce, 85 7<sup>th</sup> Place East, Suite 500, St. Paul, MN 55101-2198.

7. Complaints Received by the PUC

Copies of complaints received directly by the PUC from aggrieved persons regarding right-of-way preparation, construction, cleanup and restoration shall be promptly sent to the permittee.